U.S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
FINAL ENVIRONMENTAL IMPACT STATEMENT FOR
SANTA CRUZ ISLAND RESTORATION PLAN
CHANNEL ISLANDS NATIONAL PARK
SANTA BARBARA COUNTY, CALIFORNIA

RECORD OF DECISION

INTRODUCTION: Pursuant to §102 (2)(c) of the National Environmental Policy Act of 1969 (P.L. 91-190, as amended), and the regulations promulgated by the Council on Environmental Quality (at 40 CFR 1505.2), the Department of the Interior, National Park Service (NPS), has prepared the following Record of Decision regarding the Final Environmental Impact Statement (FEIS) for the Santa Cruz Island Primary Restoration Plan, Channel Islands National Park.

This Record of Decision is a concise statement of the conservation planning and environmental impact analysis process completed, the four alternatives considered, decisions made and the basis for the decisions, the nature of the public involvement and consultations in the overall conservation planning and impact analysis process, the mitigating measures developed to avoid or minimize potential impacts to the environment, and commitments to compliance with other environmental laws.

DECISION: The NPS will adopt and implement actions described under Alternative Four in the Final EIS issued in June 2002. Key elements of this alternative are described below as the Selected Action.

SELECTED ACTION: Upon careful consideration of all concerns and issues raised during the conservation planning and environmental impact analysis process, NPS guidelines and other appropriate laws and regulations, and with due consideration for the need for this project, the NPS has selected Alternative Four for implementation. The primary eradication strategy for Alternative Four entails establishing six hunting zones and sequentially eradicating pigs zone by zone. A summary of the key features of the Selected Action are as follows:

Feral Pig Eradication Activities: Eradication activities will begin some time after the first pig zone is fenced. While fence construction is occurring, eradication activities and fencing activities will be occurring concurrently.

Eradication techniques that may be used include walk-in traps, bait stations, ground hunting with dogs, and aerial hunting. Eradication activities may be ongoing in two or more zones during the same period of time, and can precede fence completion in order to improve operational efficiency.

Contractors charged with conducting eradication activities may be allowed to use pick-up trucks, "Jeep" type vehicles, ATV's, helicopters, and horses for on-island transportation to support their operation. Restrictions may be placed on the use of all transportation in order to protect park resources and visitors.

Eradication activities will begin in the zone referred to as the "Willows" zone. Eradication activities will then work in a general pattern beginning on the west-end of the island working

eastward as the eradication program progresses. Factors that may change the sequential order of zone eradication include: 1) fence perimeter defense strategies; 2) protection of island foxes or other wildlife, and 3) fennel control.

Timely repair and rehabilitation of zone fences, when necessary, is a critical activity. It is important to maintain the integrity of the fence in order to eliminate migration of pigs from one zone to the next, especially into zones that are pig free. In order to determine if fence repair is necessary, fence monitoring will be done on a regular basis.

It is estimated that a zone can be cleared of pigs within a one-year period, and that island-wide eradication can be achieved within a six-year period.

Construction of Pig Proof Fence: In order to implement this chosen eradication strategy, the island must be fenced into 6 distinct zones (see FEIS pg. 20 for fence locations). The five largest zones average approximately 12,000 acres in size, the smallest zone (referred to as the Central Valley Zone) is approximately 3,000 acres. Fence integrity will be such that it will be able to withstand a significant amount of physical pressure placed upon it by pigs. This includes structural integrity as well as the ability to keep pigs from crawling underneath the fence. It is estimated that fencing would be completed across all zones within two years of the start of construction.

To meet this objective, at a minimum the fence will be constructed of either triple-galvanized steel or special alloy metals to resist corrosion in the heavy marine environment of Santa Cruz Island. For fence integrity the fence design will consist of heavy-duty fence posts spaced approximately 8 ft. apart to be pounded into the ground. Mesh wire fence would be strung along the posts, secured to both the posts and the ground. Securing the fence to the ground is a critical part of fence construction to ensure pigs cannot get under the fence. Upon successful completion of the pig eradication program, and informed by results of regular monitoring, the fences will be dismantled after completion of a risk assessment.

Fennel Management: Fennel management includes both fennel control and fennel manipulation. For fennel control the herbicide that would be used is Garlon 3A at a low application rate of 1lb AI/acre. To give optimum wetting and spreading of Garlon 3A, surfactants will be used in the herbicide mix. Surfactants may include non-ionic surfactants such as R-11®, methylated seed oil (MSO), or combination of these two. Methods for distributing the herbicide to the target plant include both hand and aerial application. Aerial herbicide application requires the helicopter to be equipped with differential GPS to ensure accurate, even coverage in the specified treatment area. Hand application includes using backpack sprayers, ATV spray mounted units, and slip-on spray units mounted in the back of a pickup.

The dense fennel stand on the isthmus is the first priority for treatment (see FEIS pg. 14). Treatment will consist of pre-treating the fennel by using a fall/winter prescribed burn, then applying Garlon 3A, a selective herbicide, to the fennel in the following two springs. This protocol was developed by The Nature Conservancy in an extensive 600-acre research program in the Central Valley of Santa Cruz Island.

Additional treatment of fennel in less dense stands and in outlying populations would be required to ensure that native plant communities are not gradually overrun by fennel. The NPS and TNC propose to treat these situations by spot burning where appropriate, followed by herbicidal control.

The prescribed burn will be conducted within the limits of a fire plan and prescription that describe both the acceptable range of weather, moisture, fuel, and fire behavior parameters, and the ignition method needed to achieve the desired effects. The prescribed burn for fennel treatment would be done in the fall/winter of the year, using both hand and aerial ignition.

To avoid adverse impacts, full fennel control would be deferred until the fox population has recovered to the point where it could withstand potential direct mortality from a fire (see Mitigation below).

Fennel manipulation is necessary to successfully eradicate pigs from the island. Fennel manipulation includes mowing, cutting, or flattening the fennel to allow for corridors and other openings for strategic placement of pig walk-in traps and bait stations. Burning the fennel also reduces fennel cover and may be necessary for successful pig eradication.

RANGE OF ALTERNATIVES ANALYZED: Three alternatives to the selected action were considered and evaluated in the Final EIS. A detailed explanation of these alternatives can be found in Chapter Two of the Final EIS. A summary of the alternatives analyzed in detail is as follows.

Alternative One (No Action): Under this alternative NPS would take no action to eradicate feral pigs from Santa Cruz Island or to promote the conservation of rare species, soils, or archeological sites beyond the level of action that the NPS is currently carrying out.

Pigs would continue to occur island-wide and population numbers would fluctuate with environmental conditions. Incidental control of problem animals or focused protection of sensitive resources would occur as staff time and funding permitted.

Weed control would be restricted to current operational levels, which consists of opportunistic removal and spot spraying, but no comprehensive program. Significant fennel control would not be addressed.

There would be no specific mitigation of impacts, since this action would be a simple continuation of current operations. Monitoring efforts would not change from current NPS levels and would be restricted to measures of community health, listed plant species population health, and vegetation type classifications.

Alternative Two: Under this alternative feral pigs would be eradicated from all of Santa Cruz Island with an intensive, short duration island-wide eradication effort.

The primary tools for pig eradication would be the use of "walk-in" traps and trained hunters with dogs systematically pursuing pigs on the ground. Other techniques such as aerial hunting from a helicopter may be used when appropriate.

Feral pig eradication would occur in four phases: 1) Administration and infrastructure acquisition; 2) Hunting; 3) Final Hunting, and 4) Monitoring for Remnant Pigs. The duration and success of each of the phases would depend on a number of factors, including level of funding, environmental conditions, and pig population numbers. A short explanation of these phases is as follows.

The Administration and Infrastructure Acquisition phase would include upgrading island housing, establishing adequate communication, and defining monitoring protocols. The Hunting phase would involve simultaneous island-wide operational eradication activities using the same

techniques as the selected action. It was estimated that an intensive island-wide eradication effort would be completed in approximately two years. The Final Hunting phase would involve the contractor systematically searching for the last remaining pigs. This phase would have to be an island-wide diligent effort to kill the last remaining pigs that may be on the island. It is after this phase that hunting teams could be released from the island. The monitoring phase is an intensive period of combing the island to search for pig sign. Hunting teams and dogs would not be maintained on the island any longer. If pig sign were to be detected, hunters and dogs would be brought to the island once again. Monitoring would continue for five years following eradication of the presumed "last pig" in order to ensure that remnant pigs do not remain. Long term ecological monitoring to assess changes to the ecosystem due to pig eradication would continue into the foreseeable future.

Alternative Three: Under this alternative the NPS would build and maintain a pig-proof boundary fence approximately three miles in length. The fence would require at least two gates at the existing road crossings. Feral pigs would be eradicated from the 14,000-acre NPS portion of the island. It is expected that pigs would regularly re-enter NPS land by going through breaks in the fence, gates left open, or by going around the ends of the fence. This would result in the need to regularly eliminate pigs that enter the NPS land. In addition, NPS would have an ongoing program to maintain the fence, educate staff and visitors about the need to close gates, and to hunt pigs that get through or around the fence. The eradication of feral pigs from NPS lands would primarily involve NPS personnel and a contractor. Techniques to be used for eradication would be similar to those described in the selected action.

Pigs would remain on TNC land. As a result there would be an ongoing need to protect sensitive resources. To protect these resources fenced exclosures would be built around selected sensitive resources to exclude pigs. Sensitive resources would include known occurrences of federally listed plant populations, and the most important and threatened archeological sites. Fenced sites would be inspected and repaired on a regular basis. It would not be possible to protect all sensitive resources on the island through the use of pig-exclusion fencing.

OTHER ERADICATION METHODS CONSIDERED AND REJECTED: Several techniques for eradicating pigs were proposed, however, for various reasons the following techniques were rejected. A complete discussion on why these techniques were rejected can be found in the Final EIS (pg. 21).

Live capture of feral pigs and relocation to the mainland: Rejected because of potential transmission of swine disease from the island to the mainland. Efficacy is not assured.

Use of Poison: Rejected because of efficacy concerns and because of potential non-target impacts.

Use of Snares: Rejected because of potential non-target impacts

Use of Contraceptives or Sterilization: Contraceptives were rejected because there is no approved contraceptive available that can be delivered remotely to wild pigs. In addition, there are efficacy concerns regarding their effectiveness in animals with a high reproductive rate and the difficulty of treatment and retreatment of all animals on the island. Sterilization was rejected because of efficacy concerns regarding the inability to inject and mark each pig on the island; and it is an unproven technique for an eradication program.

Public hunting on NPS property: This option was rejected because there is no legal authority that could allow public hunting to occur in Channel Islands National Park, and public hunting, even unrestricted, has never resulted in eradication of pigs.

Use of Swine Diseases: Introduction of swine disease could provide some level of population control, however, it is not a proven technique for eradication. Hog cholera has proven to be the most effective pathogen for population control, however, it is not permitted for use in the United States because of potential disease transmission to the domestic herd on the mainland.

Dismissed Alternatives for Fennel Control: In addition to the selected action for fennel control, three alternatives were considered and rejected. The suggestions were to use mechanical control exclusively or in combination with other herbicide application techniques. Mechanical control was rejected because of efficacy, safety, and soil disturbance concerns. Exclusive use of hand herbicide application techniques would be difficult and unsafe in steep terrain and were rejected as an exclusive use option.

ENVIRONMENTALLY PREFERRED ALTERNATIVE: The analysis in the Final EIS determined that Alternative Two was the environmentally preferred alternative because it had less ground disturbance and accomplished pig eradication in the shortest amount of time. In comparison to Alternative Four, Alternative Two did not require fenced zones, and would have achieved island-wide eradication in an estimated 2-3 years. Because Alternative Two had less physical disturbance (least severity) and would be completed in the shortest amount of time (least duration of biological effects) it was determined to be the "Environmentally Preferred Alternative." However, the analysis concluded that the long-term beneficial effects would be similar if both alternatives achieved eradication.

MEASURES TO MINIMIZE HARM: The following measures will be implemented in order to minimize harm to natural and cultural resources.

Threatened, Endangered, and Proposed Species: Under Section 7 of the Endangered Species Act, the Park consulted with the U.S. Fish and Wildlife Service (FWS) regarding potential effects that may occur to Threatened, Endangered and Proposed species that occur on Santa Cruz Island. The FWS concurred with the Park's findings (11/25/2002) with the stipulation that the Park implement the following measures to avoid adverse impacts to these species:

- Access by hunters to western snowy plover nesting and wintering areas would be restricted during seasons of use. During these seasons, access would only be authorized after consultation with a NPS seabird specialist who would provide measures to minimize disturbance to a level of insignificance. Only infrequent access to these sites would be necessary during the wintering and breeding seasons
- To avoid lead poisoning to bald eagles and other animals that scavenge on pig carcasses, only non-lead bullets will be used. Should bald eagle nests become established, a 500 meter no-activity buffer from helicopter activities, and a 500-1,000 meter no-activity buffer from ground operations would be required depending on whether the nest is visible from the ground.
- Prior to being allowed on the island, dogs used in feral pig eradication will be vaccinated for all common canine diseases and would be quarantined as necessary. Dogs exhibiting aggression toward island foxes encountered in the field would be removed from the project.

- All known and historical occurrences of the nine federally listed plant species that occur on Santa Cruz Island would be visited prior to commencement of the project. Occurrences of the seven endangered plant species would be fenced if or trampling by hunters could occur. Fenced enclosures would be monitored annually to ensure effectiveness.
- Populations of the two threatened plant species, island rush-rose and Santa Cruz Island live-forever, are too large to fence. Therefore, where project activities could affect an occupied site, the NPS will post signs instructing hunters to avoid these areas. In some cases, hunters may need to enter the areas to pursue pigs within those areas. To avoid harming or trampling any listed plants, the NPS proposes to train hunters as to the location and appearance of federally protected plant species, and accompany them if necessary.
- To reduce fire danger, smoking will only be allowed in designated areas determined by NPS and TNC. These areas may become less or more restrictive depending on fire danger ratings. Fire suppression personnel will be made aware of the T&E plant locations. In the event suppression activities are necessary because of wildland fire, to the extent possible, suppression activities will avoid direct disturbance to these locations.

Cultural Resources: Channel Islands National Park determined that this project will have an effect upon the Santa Cruz Island Archaeological District (a property listed in the National Register of Historic Places), and other historic features that could be eligible for inclusion in the National Register. As mandated, Channel Islands National Park consulted with the California State Historic Preservation Office (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act, and has notified the Advisory Council on Historic Preservation of the effect finding pursuant to 36 CFR §800.6(a)(1). As a result, a Memorandum of Agreement (MOA) was developed between Channel Islands National Park and the California State Historic Preservation Office (signed on 9/9/02). This MOA stipulates the actions that will be taken in order to take into account the effect of implementing Alternative Four on historic properties. The MOA in its entirety is available for review at Channel Islands National Park Headquarters; Ventura, CA. Stipulation IV, Execution of the Undertaking, describes how the Channel Islands National Park will address issues relating to historic properties upon execution of Alternative Four. A summary of this Stipulation IV is as follows:

- Channel Islands National Park will prepare and implement a plan that addresses the effects of activities associated with pig eradication on historic properties, and a plan to address the effects of the fennel burn on historic properties.
- The Park may approve the Undertaking before the effects on historic properties of executing the Undertaking can be fully and accurately determined.
- The plans will be developed in consultation with SHPO, TNC, the Tribe and other Native American consulting parties.
- The Park will consult with the SHPO, TNC, the Tribe, and other Native American consulting parties during the earliest stages of planning regarding any proposed treatment measures.

MITIGATION ACTIVITIES: The following actions will be taken in order to mitigate the effects of implementing Alternative Four:

Native Communities:

- New weed infestations caused by the project's activities would receive timely treatment. Other weed infestations that are encountered, but are not caused by the project, need to be reported to NPS or TNC biologists.
- Intensive vegetation monitoring will be done pre and post treatment so that successional processes are understood. This information would be useful to plan necessary post-treatment native vegetation restoration work should it be necessary.
- Fencing activities including construction, inspection or maintenance that cause bare soil conditions shall be monitored to determine if erosion abatement activities need to occur. Erosion abatement activities will be conducted in erosion prone areas (steep slopes) where gully, sheet or rill erosion is likely to occur.
- Personnel constructing, inspecting, or performing maintenance on fences will inspect and clean weed seeds from clothing, shoes, and equipment prior to working in a weed-free area. Inspect and clean clothing, shoes, and equipment for weed seeds after working in a heavily infested weed area.
- *Fennel Treatment:* Buffer zones would be maintained between the fennel-dominated treatment area and adjacent native plant communities for both prescribed burn and herbicide activities. Buffers would minimize accidental overspray of Garlon 3A into adjacent intact native plant communities. Buffer zones can be treated with herbicide by hand if necessary.
- *Fennel Treatment:* The prescribed burn and herbicide implementation strategies will identify actions to mitigate the unnecessary burning or spraying of large, intact native plant communities within the treatment area. These actions are necessary to protect native plant refugia that can serve as native plant seed sources for the treated areas.
- *Fennel Treatment:* Monitoring should be done to measure the increases in noxious weeds such as yellow starthistle. If infestations begin to occur, immediate action should be taken to remove such invaders. This would avoid causing a secondary invader species to become established and causing the same or more severe ecological impacts as the initial species being treated.
- *Fennel Treatment:* All vehicles traveling from yellow starthistle infested areas will be cleaned before entering the project area. Areas where it is known to occur on the isthmus - along the roadside near Prisoner's Harbor – should be treated as soon as possible. Monitoring should be conducted within the treated area for two years following the large-scale treatment and any detected infestations of yellow starthistle should be rapidly treated.

Threatened and Endangered Plant Species:

See above (Measures to Minimize Harm)

Santa Cruz Island Fox:

- Defer the burn and herbicide treatments until the island's fox population is robust enough to withstand some possible direct mortality of individuals or disruption of breeding for several territorial pairs of island foxes. Demographic modeling will be conducted to determine the target island fox population size that can withstand these effects.

- Trap as many island foxes as possible from the proposed treatment area, and hold until the burn is completed. Radiocollar foxes prior to release back into treated area, to determine effects on habitat use, dispersal, and breeding.
- Dogs, prior to being allowed on the island, will be vaccinated for all common canine diseases. Owners will be required to submit inoculation documentation.
- Dogs exhibiting aggression toward island foxes encountered in the field will be removed from service.

Physical Resources (soils, water, and air quality):

- Dead carcasses will not be left in or near live water sources, or in shallow groundwater areas with poorly drained soils.
- Actions that result in significant soil disturbance will be evaluated to determine if erosion abatement needs to occur. Erosion abatement would occur if NPS or TNC restoration biologists feel it necessary to protect soil resources.
- Herbicide will not be applied in drainages that do not contain the target species.
- *Fennel Treatment*: Prescribed burning will occur only when favorable meteorological conditions are present.
- *Fennel Treatment:* The vegetation to be burned shall be in a condition that will facilitate combustion and minimize the amount of smoke emitted during combustion.
- *Fennel Treatment:* The total amount of material to be burned each day shall be regulated according to criteria approved by the APCD Control Officer.
- *Fennel Treatment:* NPS, working with the concessionaire, will give notification to visitors that have heart or lung disease, such as congestive heart disease, chronic obstructive pulmonary disease, emphysema or asthma to avoid areas that could become smoke infested.

Cultural Resources:

- Conduct hunter orientation to instruct hunters on how to avoid impacting archeological sites.
- Survey campsites and trap locations to avoid locating them in any culturally sensitive locations.
- If cultural resources are found during survey activities for the fennel burn: hand-cut vegetation around resources; rebury known exposed burials (in consultation with the Chumash); use an archeological monitor to avoid damage to archeological sites when establishing fire lines, access routes and staging areas.
- Conduct post-burn archeological surveys with Chumash monitor in case exposed human remains are encountered.

MONITORING: Pre-eradication surveys for baseline data of pig damage, flora and fauna abundance and distribution will be conducted. Post-eradication surveys of similar components will be conducted in order to measure ecosystem responses to the eradication of feral pigs and control of invasive species, such as fennel.

PUBLIC INVOLVEMENT: Public involvement regarding this project was sought during three distinct phases (Scoping, Draft EIS, and Final EIS) of the NEPA compliance process. A summary of public involvement actions that occurred in each phase is summarized as follows:

Scoping

Scoping refers to the effort the Park made to solicit comments on the proposed restoration plan.

- *Federal Register:* A notice to prepare an Environmental Impact Statement was published in the federal register on September 13, 1999.
- *Letter:* A letter describing the proposed action was sent on October 8, 1999 to 124 individuals and organizations who expressed interest in the Park's management, and government agencies that might have oversight/regulatory concerns about the project.
- *Public Meetings:* The Park hosted two public meetings. The first meeting was on October 20th, 1999 in Ventura, and the second meeting was held in Santa Barbara on October 27th, 1999. At these meetings, the Park presented the need for the proposed action as well as the proposed action. The Park placed an announcement in the local newspaper to gain wider distribution (Ventura County Star 10/12/99). Approximately 20 people attended the meetings.
- *Website:* In early October 1999, the park launched the project website that gave information regarding the project.

Draft Environmental Impact Statement (Draft EIS)

The Park's scoping efforts yielded seventeen written comments, most of which asked the Park to consider using sport hunting as an option for eradication. The Park used the public scoping comments to prepare a Draft EIS, which was completed in March 2001. The Park distributed approximately 100 copies of the Draft EIS to individuals, groups, and government agencies that were on the Park's project mailing list. In addition the Park solicited additional comments on the Draft EIS by the following methods:

- *Federal Register:* The federal register posted a Notice of Availability for the Draft EIS on March 9, 2001. The EPA filing notice for the Draft EIS was February 23, 2002.
- *Press Release:* The Park issued a press release on February 23, 2001 to the 50+ local media outlets that are part of the Park's Public Relations mailing list. This resulted in an article in the Los Angeles Times (Biologists Propose Killing Wild Pigs on Santa Cruz Island) on February 28, 2001.
- *Public Notice:* Placement of a public notice announcing the availability of the Draft EIS and announcement of the public meetings was placed in both the Santa Barbara News Press (3/5/01) and the Ventura County Star (3/6/01).
- *Public Meetings:* Two public meetings were held: March 22, 2001 at the Santa Barbara Museum of Natural History; and March 29, 2001 at Channel Islands National Park Auditorium. A total of twenty-eight people attended the public meetings. Issues brought up at the public meetings included: fennel treatment, sport hunting, funding, California Department of Fish and Game role, and timing of eradication activities.
- *Website:* The Park posted the Draft EIS on its website in PDF format.

- *Public Libraries:* The Draft EIS was made available at the Central Library in Santa Barbara and the Foster Library in Ventura.

Final Environmental Impact Statement (Final EIS):

In total, 36 letters or e-mail correspondences were provided to the Park during the 60-day comment period for the Draft EIS. From this correspondence, the Park identified 66 substantive comments. These comments were divided into 14 categories. In Chapter Six of the Final EIS, the Park responded to all 66 substantive comments. The Park used these comments to modify alternatives, supplement/improve/modify the analysis, make factual corrections, and clarify information in the draft version. Approximately 207 copies of the Final EIS were distributed to all individuals, organizations, and government agencies that participated in the NEPA compliance process. Notice of availability of the Final EIS was as follows:

- *Federal Register:* A notice of availability of the Final EIS was posted in the federal register on September 3, 2002. The EPA filing date for the Final EIS was October 18, 2002. In addition, EPA's no-need-to-comment was noticed in the Federal Register on November 1, 2002.
- *Public Notice:* Two public notices were posted in local newspapers. The Ventura County Star and the Santa Barbara Newspress published the notice on September 13, 2002.
- *Website:* The Final EIS was posted on the project's website in early September 2002.
- *Public Libraries:* The Final EIS was made available at the Central Library in Santa Barbara and the Foster Library in Ventura.

AGENCY CONSULTATION: This project meets all pertinent federal laws. A summary of these laws is as follows:

Clean Water Act: The US Army Corps of Engineers commented on the action and gave the Park guidance on obtaining permits should the project impact waters on or around the islands.

Endangered Species Act: A biological assessment was completed by the Park and reviewed by the US Fish and Wildlife Service. The USFWS concurred with these findings in a letter dated November 25, 2002.

National Historic Preservation Act: Channel Islands National Park determined that this project will have an effect upon the Santa Cruz Island Archaeological District (a property listed in the National Register of Historic Places), and other historic features that could be eligible for inclusion in the National Register. As mandated, Channel Islands National Park consulted with the California State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act, and has notified the Advisory Council on Historic Preservation of the effect finding pursuant to 36 CFR §800.6(a)(1). As a result, a Memorandum of Agreement (MOA) was developed between Channel Islands National Park and the California State Historic Preservation Office (signed on 9/9/02).

Coastal Zone Management Act: A Negative Determination for federal consistency review was provided to the California Coastal Commission (CCC). The CCC concurred with the Park's negative determination in a letter dated May 28, 2002.

IMPAIRMENT:

Alternative One – No Action

The no-action alternative would allow for pigs to remain throughout the island. Pig disturbance, as described in Chapter One, is responsible for the decline of important park resources including: native island vegetation including Threatened and Endangered plant species; island fox, archeological sites, and soil resources.

Enabling Legislation: Title II § 202 of Public Law 96-199 states that Channel Islands National Park is established in order to protect the nationally significant natural, scenic, wildlife, marine, ecological, archaeological, cultural, and scientific values. The Park has determined that in order to meet enabling legislative intent and to protect natural and cultural resources, pigs must be removed from the island. Protection cannot be afforded to these resources and impairment of park resources is occurring under this alternative.

Natural and Cultural Resource Integrity/Enjoyment of the Park: Damage to natural and cultural resources as a result of pig disturbance can be found in every major watershed of Santa Cruz Island. Experts in the fields of wildlife biology, botany, and archeology believe that continuance of pig presence on Santa Cruz Island significantly compromises the integrity of natural and cultural resources. Park enjoyment for people who work or visit SCI is diminished by:

- visible scars on the landscape of SCI from pigs rooting large areas
- large patches of alien weeds that are perpetuated because of pig disturbance
- improbable chance of viewing native wildlife, especially the island fox
- viewing pig starvation because of the lack of adequate food resources on SCI

General Management Plan: The GMP (1985) specifically calls for the removal of swine from Santa Cruz Island. Pigs have been identified as the greatest perturbation to the island's cultural and natural resources. Under this alternative they would remain on the island which is contrary to GMP policy.

Alternative Three

Enabling legislation designates all of Santa Cruz Island as wholly within the boundaries of Channel Islands National Park. It also allows for federal funds to be expended for the cooperative management of TNC lands on Santa Cruz Island. Alternative Three would not result in cooperative management of TNC lands because different levels of protection would be implemented based on land ownership. Equal protection of park resources would not be attained resulting in degradation of cultural and natural resources as a whole. Degradation of resources would result in a decline in both park enjoyment and natural and cultural resource integrity. Every significant cultural or natural resource on Santa Cruz Island is of interest to the park. Lack of cooperative management, degradation of natural and cultural resources, and decline in visitor enjoyment would result in impairment.

Alternatives Two and Four

Enabling Legislation and General Management Plan: Alternatives Two and Four both propose eradicating pigs on all of Santa Cruz Island. Eradicating pigs in order to protect the natural ecosystem is consistent with goals and objectives found in the Park's enabling legislation and the Park's GMP. The actions proposed to implement these alternatives have varying degrees of

impacts. However, these impacts are expected to be short-term and reversible, with the exception of impacts to cultural resources, which are not reversible. Based on enabling legislation, GMP, and the findings of this EIS these actions would not impair park resources.

Natural and Cultural Resource Integrity/Enjoyment of the Park: Unlike Alternative One and Three, these alternatives would improve natural resources and protect cultural resources on all of SCI. By improving these resources, enjoyment of the Park would be enhanced.

ENVIRONMENTAL ISSUES:

Unavoidable Adverse Impacts: The selected action will not have any significant natural resource impacts that cannot be fully mitigated or avoided. For cultural resources, the selected action will subject part of the island to the adverse effects of pigs up to four years longer than Alternative Two. In the interim period, at great expense, cultural resources can be protected from the adverse effects of feral pigs by fencing, or implementing localized pig control. However, because of the widespread and abundant nature of cultural resources throughout the island, it would be impossible and impracticable to protect all cultural sites during the interim period.

Irretrievable and Irreversible Commitment of Resources: No permanent or long-term commitment of natural resources will result from implementing the selected action. Under the selected action, there will be ongoing, irreversible cultural resource impacts caused by feral pigs until the zones are free of pigs.

RATIONALE FOR DECISION:

In evaluating the alternatives and selecting Alternative Four the NPS considered several factors: (1) consistency with agency guidelines and policies, including the Channel Islands General Management Plan; (2) extent to which it meets the "Purpose and Need" of the project; and (3) extent to which it responds to and/or resolves the environmental issues raised in the EIS process.

<u>Agency Mission and Guidelines/Enabling Legislation/General Management Plan</u>

The selected action is consistent with National Park Service mission and guidelines, the Park's enabling legislation, and the management direction in the Park's General Management Plan (GMP).

National Park Service Mission: The National Park Service mission is put forth in the Organic Act (1916) which states that… "by such means and measures as conform to the fundamental purpose of the said parks, monuments and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations". In its analysis the Park determined that feral pig presence on Santa Cruz Island is impairing natural, archaeological, and cultural resources. Removal of feral pigs, as proposed under the selected action, is required in order for the Park's management of Santa Cruz Island to meet the National Park Service Mission.

Enabling Legislation: Title II § 202 of Public Law 96-199 states that Channel Islands National Park is established in order to protect the nationally significant natural, scenic, wildlife, marine, ecological, archaeological, cultural, and scientific values. The Park has determined that in order to meet enabling legislation intent and protect natural and cultural resources, pigs must be

removed from Santa Cruz Island. The selected action is consistent with the Park's enabling legislation.

General Management Plan: The GMP, completed in 1985, defines management direction for the natural resources within the Park. For Santa Cruz Island the GMP (pg. 40) calls for removal of swine in order to manage the island ecosystem toward natural conditions. Feral pigs have been identified as the greatest perturbation to the island's cultural and natural resources. The selected action is consistent with the current GMP in meeting this objective. The selected action is also consistent with the Park's Resources Management Plan (RMP). The RMP identifies this project as a necessary action to perpetuate natural processes and resources within the Park. The RMP flows from the GMP and Statement for Management (1991). The RMP is the Park's strategic plan for the long-range management of resources and a tactical plan identifying short-term projects.

Purpose and Need

The purpose of the Santa Cruz Island Primary Restoration Plan is to protect the unique natural and cultural resources of the island from continued degradation and to initiate recovery of the island ecosystem by island-wide eradication of feral pigs and controlling fennel. Accomplishment of these actions will: protect and initiate restoration of native plant communities; protect Threatened/Endangered and rare plant species; control and reduce the spread of invasive non-native weeds, such as fennel; protect island foxes through removal of the non-native food source (feral pigs) supporting non-native golden eagles; conserve archeological sites threatened by accelerated erosion and pig rooting; and initiate conservation and restoration of soil resources. Identified as the preferred action by the Park, Alternative Four is rated as having high efficacy for achieving the eradication objective. The Park also determined that this implementation strategy is the most compatible with current park operations and therefore easier to implement. The Park's partners, island researchers, biologists, and other resource and regulatory agencies concur with the Park that eradicating feral pigs from Santa Cruz Island is a necessary conservation project.

Environmental Issues

Five environmental issues were analyzed in the Final EIS. A summary of how this selected alternative addresses these issues is as follows:

Likelihood of Achieving Success: Efficacy is an important consideration because project failure would have significant impact on natural and cultural resources. Alternative Two and Four were both rated as having a high likelihood of success. Alternative Four however may have attributes that would enhance efficacy in some circumstances. For example, an important attribute is the fenced zones. This strategy would be advantageous should an unforeseen circumstance delay the eradication effort, as the zones that are pig-free would remain so because of the fence and no additional hunting effort would be required in these areas.

Vegetation Impacts: In the long-term, native communities and Threatened and Endangered plants will benefit from pig removal. However, the analysis described that Alternative Four will have short-term negligible impacts to these resources mainly due to the activities associated with fence construction and fennel treatment. Mitigation actions were incorporated into the selected action that will lessen the effects of these activities. It is important to note that the recovery plan for the eight Threatened and Endangered plant species on Santa Cruz Island states that in order

for recovery to occur, pigs must be removed from the island. The short-term impacts associated with pig eradication are far less than the on-going and severe impacts caused by pigs.

Island Fauna Impacts: The environmental analysis determined that the greatest impact to island fauna is the effect of the fennel burn on the island fox. Because of the tenuous population status of the island fox, Alternative Four will structure its sequence of the fennel treatment activities so that it will avoid significant impact to the island fox population. This will be done by deferring the burn and herbicide treatments until the island's fox population is robust enough to withstand possible limited mortality of a few individuals or disruption of breeding for several territorial pairs of island foxes. Demographic modeling will be conducted to determine the target island fox population size that can withstand these effects. Other than island fox, there are only negligible short-term impacts to other island fauna with implementation of Selected Action. Removal of pigs is of vital importance to island fox restoration efforts. The feral pigs are the primary food source for the golden eagle that preys on island foxes. This project will not have intentional take of birds listed under the Migratory Bird Treaty Act (MBTA). Long-term, this project will improve overall habitat conditions for MBTA species.

Impacts to Physical Resources: Water quality will ultimately improve with the removal of pigs from the island. Negligible short-term soil disturbance may result from activities associated with construction of pig fence or prescribed burning activities. Although soil disturbance could create conditions conducive for introduction or expansion of exotic species, mitigation measures (see above) have been incorporated that will minimize soil disturbance, or will implement actions that will stabilize disturbed areas.

Impacts to Cultural Resources and Human Uses: Feral pig impacts to cultural resources are irreversible and without pig eradication would be ongoing. Implementation of Alternative Four will eliminate pig induced cultural resource impacts from occurring into perpetuity. Alternative Four, the selected alternative incorporates actions that will minimize impacts to cultural resources, as summarized above, significant among these actions is a cultural resource monitor that will monitor ground disturbing activities to avoid or mitigate actions that might impact cultural resources.

CONCLUSION:

Based upon…..

- the environmental impact analyses demonstrating that this project will have short-term impacts but will ultimately benefit Channel Islands National Park's resources,
- the selected action will have a high likelihood of achieving its objective,
- the selected action is compliant with the agency mission, Channel Islands National Park management plans, and other pertinent laws and regulations,
- the selected action addresses the environmental issues by implementing measures to minimize harm,
- the selected action is a reasonable and rational effort that is supported by Channel Islands National Park partners, researchers, other government regulatory agencies, and most environmental organizations,
- implementing this action will avoid impairment of Channel Islands National Park resources,

Alternative Four is approved for implementation by Channel Islands National Park.

Signed: /s/ Jon Jarvis (original signature on file) Date:_____

Jon Jarvis

Regional Director, Pacific West Region